

EFFECTIVENESS MONITORING COMMITTEE ANNUAL WORK PLAN

The EMC Work Plan documents yearly EMC accomplishments and the status of ongoing projects. It is linked to the EMC Strategic Plan and is a separate document that is updated annually. It is provided to the Board for yearly approval. It includes a summary of EMC accomplishments. It details the funding for the year. It provides an update of current EMC membership and staffing. Finally, it tracks all projects submitted to the EMC, both those considered and those selected for funding.

Commented [SH1]:

EMC ACCOMPLISHMENTS

During 2017/2018 the EMC accomplished the following:

- Updated EMC Strategic Plan.
- Regularly met in open, webcast public meetings to conduct its work.
- Conducted revision of old and production of new metrics for the EMC project ranking process by a two person sub-committee.
- Board staff, with the assistance of the EMC, is working on removing required CAL FIRE reporting standards by regulatory processes to reduce the burden on CAL FIRE forest practice staff.
- Developed new standard project description forms for potential primary investigators to use when submitting their projects to the committee for review.
- Received an indefinite allocation of \$425,000 each fiscal year in perpetuity from the Timber Regulation and Forest Restoration Fund. The Board is using the funds to fund EMC- supported projects based on priority and availability of resources.
- Developed and posted a Request for Proposal (RFP) soliciting monitoring project proposals to the EMC website.
- Reviewed project proposals throughout the year, and approved six (6) projects for funding.
- Gained the addition of one (1) new co-chair.
- Utilized the project ranking procedure included in the EMC Strategic Plan to select six (6) proposed effectiveness monitoring projects to support (Table 1).

Commented [SH2]: What does this mean?

Commented [PC3]: Call out form by names

Commented [SH4]: Which forms do you mean? Spell out.

Commented [PC5]: May keep if we add or redo redo critical questions

Commented [PC6]: No new members this year

Commented [PC7]: I don't believe we had any projects we chose to support with no funding unless im mistaken

EMC Projects Ranked and Funded (2017 & 2018) (rev. 02-09-18)

				Funding (NOT TO EXCEED)	
Project	Project Title	Primary Investigator	Ranking Score	Fiscal Year 2016	Fiscal Year 2017
EMC-2017-001	UC Davis Nutrient Study	UC Davis & CAL FIRE	17.17	\$92,252.00	-
EMC-2017-002	Avian Richness Study	Ms. Stacy Stanish (CAL FIRE)	18.17	\$6,500.00	-
EMC-2016-003	Repeat LIDAR surveys to detect landslides	Dr. Matt O'Connor (Public)	18.25	-	\$100,000.00
EMC-2017-004	Class III Watercourse monitoring	CAL FIRE Watershed Protection Program	20.36	-	\$18,930.00
EMC-2017-006	Wildfire hazards in WLPZs	Dr. Rob York (UC Berkeley)	19.95	-	\$114,855.00

Commented [PC8]: I realize this is redundant, but it might be nice to have just a quickly viewable table for Board members/people that just want to look really quick and not take the time to read all of the summaries.

EMC-2017-007	Tree Mortality and Snag Retention in the Sierra Nevada	Dr. John Battles (UC Berkeley)	19.22	-	\$71,238.00
EMC-2017-008	California FPRs and relation to fir mortality	Dr. Richard Cobb (Cal Poly, SLO)	18.50	-	\$108,986.00
EMC-2017-010	Alternative Meadow Restoration	Dr. Chris Surfleet (Cal Poly, SLO)	18.92	-	-
EMC-2017-012	Bat community impacts on State Forests	Dr. Michael Baker (CAL FIRE)	17.40	-	\$10,991.00

EMC FUNDING

For Fiscal Years 18/19 and 19/20, the EMC has been allocated funding of \$425,000 per fiscal year from the TRFR Fund. This funding is being used to support EMC projects and was granted through the normal Board/CAL FIRE contracting process. Projects were funded based upon EMC priorities, as identified through ranking criteria provided in the EMC Strategic Plan.

Table 1. 2018 EMC-Supported Effectiveness Monitoring Projects.

Project Number and Title	Summary	EMC Funding and Status	Study Collaborators
EMC-2016-003: Conceptual Design and Implementation Planning for Evaluation of Effectiveness of FPRs for Unstable Areas	This study will attempt to assess whether the California FPRs encourage large wood recruitment into perennial streams, and whether predominate conifers are allowed to be retained and what input they have on filtering sediment into streams. Additionally, it will measure how astute the FPRs are at mitigating or preventing mass sediment wasting following accelerated erosion events, such as landslides.	Funded, in the contracting process (\$100,000.00)	CGS, private consultants
EMC-2017-004: Monitoring Class III watercourse runoff in managed forests	The potential for Class III watercourses to have timber-harvest related sediment delivery, coupled with limited knowledge of the thresholds to initiate and sustain flow in Class III watercourses, represents a knowledge gap for both	Funded, in progress (\$18,930.00)	CAL FIRE Watershed Protection Program Staff

	<p>understanding and managing hydrologic systems in working forests. The ability to determine the effectiveness of Forest Practice Rules in preventing detrimental hydrogeomorphic changes Class III watercourses relies heavily on a basic understanding of how these features function hydrologically in different areas.</p>		
<p>EMC-2017-006: Tradeoffs among riparian buffer zones, fire hazard, and species composition in the Sierra Nevada</p>	<p>The objective of this project is to establish a network of locations that will be maintained as long-term study sites, periodically providing information relevant to policy and management for decades. This model, which requires outside funding but also significant landowner commitments, has worked on UC Center for Forestry forests to evaluate alternative management practices' impacts on various responses (e.g. fire hazard: Stephens and Moghaddas 2005; species diversity: Battles et al. 2001; timber productivity: York et al. 2015). Results from these various studies are integrated into ongoing outreach programs such as legislature tours, professional workshops, and NGO meetings. We want to expand this management-research-outreach model by evaluating the effectiveness of existing WLPZ regulations as well as other evidence-based alternatives that aim to sustain low fire severity and species diversity in and</p>	<p>Funded, in progress (\$114,855.00)</p>	<p>UC Berkeley, UCANR Extension Specialists</p>

	around riparian Sierra Nevada forests.		
EMC-2017-007: The life cycle of dead trees: Implications for forest management in the Sierra Nevada	The goal of this project is to quantify the life cycle of standing dead trees in order to inform forest management and policy development.	Funded, in progress (\$71,238.00)	UC Berkeley, UCANR Extension Specialists, USFS PSW Research Station
EMC-2017-008: Effectiveness Monitoring and Evaluation: Do Rules minimize fir mortality from root diseases and bark beetle interactions	Our project focuses on fir engraver beetle (<i>Scolytus ventralis</i>) and seeks to understand if treatments for the control of <i>Heterobasidion</i> root disease create forests that are more resilient to beetle outbreak, therefore better meeting the spirit of the California Forest Practices Act to create healthy, productive, and appropriately stocked forests.	Funded, in progress (\$108,986.00)	Cal Poly, UC Berkeley, CAL FIRE
EMC-2017-010: Effectiveness of meadow and wet area restoration as an alternative to watercourse and lake protection zone (WLPZ) rules.	The goal is to quantify the hydrologic response before and after meadow restoration on meadows in the Sierra Nevada and Cascade mountains. We propose to continue monitoring meadows currently under study and adding one additional meadow at Rock Creek, Plumas County, CA. The meadow restoration treatment to be evaluated is removal of encroached lodgepole pine (<i>Pinus contorta</i>).	Initially funded, but project rescinded by primary investigator	Cal Poly, Collins Pine Co., The Nature Conservancy, The American River Conservancy
EMC-2017-012: Assessment of Night-Flying Forest Pest Predator Communities on Demonstration State Forests – with Monitoring across Seral Stages and Silvicultural Prescriptions	This study seeks to determine the relative abundance of bat species among DSFs, seral stages, and silvicultural prescriptions as the first step in the broader study of management approaches and resultant habitat conditions that promote healthy communities of night-flying forest pest predators. While this	Co-funded by EMC and CAL FIRE DSF Program, in progress (\$10,991.00)	CAL FIRE, CDFW, other collaborators TBD

	objective is appropriately narrow in scope for a baseline and short-term effectiveness monitoring study, future related studies could include longer-term effectiveness and trend monitoring that could be expanded across additional study areas and forest habitat designations.		
EMC-2017-001: Effects of Forest Stand Density Reduction on Nutrient Cycling and Nutrient Transport at the Caspar Creek Experimental Watershed	This study, in conjunction with researchers from UC Davis, will examine changes in major nutrients across sub-watersheds harvested with varying levels of stand density reduction in the South Fork of Caspar Creek. A range of treatments will be used, going from 25% reduction to a 75% reduction. This experiment in the Caspar Creek watershed will result in a systematic understanding of the connection between forest canopy removal and watershed processes that can be used to develop sound management	Project funded (\$92,252.00 from EMC), additional funding from CAL FIRE and the Save the Redwood League	UC Davis, CAL FIRE, USFS PSW

	<p>practices in similar Coast Range watersheds in the future. This project is part of suite of studies collectively known as the Third Experiment at Caspar Creek.</p> <p>Specifically, the goal of this research is to examine how forest harvesting affects ecohydrological/ biogeochemical processes and nutrient cycling within the South Fork of Caspar Creek.</p>		
<p>EMC-2017-002: Using Automated Bird Recorders to Determine Differences in Bird Occupancy of Four Habitat Types in a Post-Fire Setting</p>	<p>Forest fires play an important ecological role for California's wildlife. However, in recent years, high severity wildfires have become uncharacteristically large, severe, and spatially contiguous. Forest managers utilize salvage harvesting as a mechanism to recover the value of timber lost to these fires and to prepare the area for restocking with conifer seedlings. Past studies have shown that there is an increase in cavity-nesting, insectivorous bird species such as woodpeckers in post-fire landscapes. The goal of this study is to examine how fire and salvage harvesting affect bird presence and diversity in the post-fire setting of BMDSF.</p>	<p>Funded, in progress (\$6,500.00)</p>	<p>CAL FIRE, CDFW</p>

Detailed Description of EMC Supported Monitoring Projects

EMC Supported Monitoring Projects – 2017 and 2018

(Available online at: http://bof.fire.ca.gov/board_committees/effectiveness_monitoring_committee_/)

EMC-2016-003: (Collaborators: CGS, Dr. Matt O'Connor) Considerable effort is invested in THP development to avoid erosion and sedimentation impacts to water quality, fish habitat and stream channel condition that could result from forest practice activities in “unstable areas” that could contribute to triggering landslides. Road design, WLPZ design, and specific hillslope silvicultural prescriptions are intended in part to prevent disturbance to unstable areas that would have a high likelihood of delivering sediment to streams should a landslide occur. Additional mitigation and/or avoidance measures affecting forest practices on or near unstable areas are developed by consulting geologists or California Geological Survey geologist. Some aspects of WLPZ design and specific hillslope silvicultural prescriptions encourage retention of trees associated with unstable areas as a source of LWD recruitment. The effectiveness of these THP regulations and design objectives is not easily tested, largely because mass wasting events (landslides of various types) are relatively rare. Triggering events for episodes of mass wasting are typically large magnitude, low frequency rainfall (or rain-on-snow) events that deliver large volumes of water to the landscape over short periods of time that stress hillslopes by causing high levels of water to accumulate in soil materials. Events such as wildfires and earthquakes can add to stress conditions that test hillslope stability. When stressing events cause a significant number of individual landslides to occur, the affected area may be relatively large, encompassing many watersheds and a wide range of “treatments” on the landscape related to forest practices. These events may cause substantial resource damage, but they also provide an opportunity to investigate the conditions under which individual landslides occur and their relationship to historic forest management practices and current FPRs. Examples of such studies are noted in section 4.2.2 of the EMC Strategic Plan. A substantial number of landslide inventories have been conducted on commercial timberlands in California for Habitat Conservation Plans. Furthermore, Habitat Conservation Plans (HCP's) cover some areas in the north coast of California typically include additional measures designed to prevent management-caused landslides. Additionally, similar studies have been conducted in the western United States (e.g. US Forest Service Klamath Forest report following storms in 1996-97; Oregon Department of Forestry's reports following both the 1996-97 and 2007 storms; Washington's report following the 2007 storms). With this background in mind, this proposed project would develop a conceptual study plan to prepare for an investigation of FPR effectiveness immediately following a future episode of mass wasting in forested watersheds in the North Coast, Klamath or northern Sierra Nevada region, or elsewhere in California.

EMC-2017-001: (Collaborators: UC Davis, CAL FIRE, USFS Pacific Southwest Research Station) Forest management strategies and forest harvesting, in particular, are often implicated as having adverse effects on nutrient cycling, sediment transport and hydrological processes in forested watersheds. This study is examining changes in major nutrients across sub-watersheds harvested with varying levels of stand density reduction in the South Fork of Caspar Creek. A range of treatments will be used, going from 25% reduction to a 75% reduction. This experiment in the Caspar Creek watershed will result in a systematic understanding of the connection between forest canopy removal and watershed processes that can be used to develop sound management practices in similar Coast Range watersheds in the future. This project is part of suite of studies collectively known as the Third Experiment at Caspar Creek.

EMC-2017-002: (Collaborators: CAL FIRE, CDFW) This project is documenting avian richness following the 2015 Valley Fire at Boggs Mountain Demonstration State Forest, which burned an overwhelming majority of its total area. This study is capturing the diversity of bird species inhabiting a mosaic of landscapes (burned and unburned sites) with different levels of site preparation (including salvage logging, pre-emergent herbicide spraying, etc.) for conifer planting, utilizing methodology and protocols utilized by the CDFW's Eco-Regional Biodiversity Monitoring project. The goal of this study is to examine how fire and salvage harvesting affect bird presence and diversity in the post-fire setting of BMSDF.

EMC-2017-004: (Collaborators: CAL FIRE Watershed Protection Program): The potential for Class III watercourses to have timber-harvest related sediment delivery, coupled with limited knowledge of the thresholds to initiate and sustain flow in Class III watercourses, represents a knowledge gap for both understanding and managing hydrologic systems in working forests. The ability to determine the effectiveness of Forest Practice Rules in preventing detrimental hydrogeomorphic changes Class III watercourses relies heavily on a basic understanding of how these features function hydrologically in different areas. This project proposal has four objectives: • Determine the Class III flow regimes in harvested and unharvested watersheds in the northern part of the California Coast Ranges, Inland Coast Ranges, and southern Cascade Range. • Determine rainfall duration, depth, and intensity thresholds that control flow initiation. • Assess the flow duration to determine temporal connectivity to the stream network. • Determine the spatial connectivity of flow within Class III watercourses, and to the downstream hydrologic network. Monitoring the flow within Class III watercourses throughout the year, over a range of locations and management histories, will help to clarify the degree to which Class III watercourses contribute to the hydrologic network in forests. Further, this project will offer critical insight to the flow regime of Class III watercourses, and the influence of timber harvesting. The study will also provide additional data for model calibration of the Distributed Hydrologic Soil Vegetation Model in the South Fork Caspar Creek.

EMC-2017-006: (Collaborators: Dr. York, UC Berkeley, Ariel Thomson, RPF, Assistant Resource Manager, Berkeley Forests, Scott Stephens, Professor of Fire Ecology, UC Berkeley, Bill Stewart, RPF, Forest Extension Specialist and Co-Director of UC Center for Forestry, Ken Somers, RPF, Manager, Grouse Ridge Research Forest, Ricky Satomi, MF, Forest Advisor, UC Extension Kate Wilkin, PhD, Forest Advisor, UC Extension) The objective of this project is to establish a network of locations that will be maintained as long-term study sites, periodically providing information relevant to policy and management for decades. This model, which requires outside funding but also significant landowner commitments, has worked on UC Center for Forestry forests to evaluate alternative management practices' impacts on various responses (e.g. fire hazard: Stephens and Moghaddas 2005; species diversity: Battles et al. 2001; timber productivity: York et al. 2015). Results from these various studies are integrated into ongoing outreach programs such as legislature tours, professional workshops, and NGO meetings. We want to expand this management-research-outreach model by evaluating the effectiveness of existing WLPZ regulations as well as other evidence-based alternatives that aim to sustain low fire severity and species diversity in and around riparian Sierra Nevada forests.

To reach this long-term goal, we are proposing a phased approach. In the short term (2 years), we propose to establish pilot sites at UC Blodgett Forest Research Station, with the mid-term (3 years) aim of expanding study locations to other research forests in Nevada County (UC Grouse Ridge Research Forest) and Shasta County (UC Marble Creek Research Forest). In the long-term (5 years), we aim to expand the study locations onto collaborators' lands at additional Sierra Nevada sites on private and state demonstration forest lands. Specifically, the treatments will be designed to reduce fire hazard and regenerate a diversity of species in Class I and Class II WLPZ areas. In order to evaluate the effectiveness of regulations experimentally, it will be necessary to have the capacity to conduct trials of treatments that are beyond the limitations of current regulations.

EMC-2017-007: (Collaborators: Dr. John Battles (UC Berkeley), Dr. Rob York (UC Berkeley), Dr. Jodi Axelson (UCANR Extension), Dr. Stacy Drury (USFS)) The goal of this project is to quantify the life cycle of standing dead trees in order to inform forest management and policy development. We will rely on a rare resource -- a long-term snag inventory and monitoring study at Blodgett Forest Research Station. In

1983, all the snags (≥ 5 " diameter at breast height, DBH) in a 59 ac stand (Compartment 160) were evaluated and tagged. The evaluation included several measures of decay (e.g., wood strength, presence of bark) as well as a detailed assessment of habitat elements (e.g., woodpecker holes, cavities). The inventory has been repeated at irregular intervals: 1989, 1994/95, 2005, and 2012. There are currently 1,163 snags being tracked and the study has recorded 680 tree falls. This study has proven valuable for estimating fall rates and for quantifying wildlife habitat value. However to obtain precise rates of change, we need to monitor individual snag more regularly and more frequently. Also to complete the snag life cycle, decay rates of downed wood must be added. To our knowledge, there is exactly one empirical estimate of log decay in the Sierra Nevada (white fir in Sequoia National Park, Harmon et al. 1987). Finally, we have the opportunity to obtain vital baseline information on the flammability of snags across a range of species common to California. As part of a previous study on snag decay rates (Cousins et al. 2015), we have archived almost 100 wood samples collected from five species spanning all stages of decay. There are no known studies of snag flammability by species or decay state that we are aware of in California.

Compartment 160 at Blodgett Forest is a mature mixed conifer forest under single-tree selection management. Stand basal area in 2013 averaged 169 ft²/ac. White fir and Douglas-fir are the dominant species ($> 20\%$ relative dominance) but incense-cedar (18%), ponderosa pine (16%), sugar pine (12%), and black oak (9%) are common. For the entire stand, there are approximately 9,900 live trees (≥ 5 " DBH) with 3,200 of these trees ≥ 20 " DBH. Given prevailing mortality rates, about 100 new snags are recruited each year.

EMC-2017-008: (Collaborators: Dr. Richard Cobb (Cal Poly, SLO), Dr. Chris Lee (CAL FIRE), Dr. Matteo Garbelotto, Nick Kent (Collins Pine Co.), Dr. David Rizzo (UC Davis), Beverly Bulaon (USFS)). This proposal seeks to evaluate several sections of the Forest Practice Rules for their effectiveness in controlling fuels accumulation in the face of devastating bark beetle outbreaks in true fir stands. Our project focuses on fir engraver beetle (*Scolytus ventralis*) and seeks to understand if treatments for the control of *Heterobasidion* root disease create forests that are more resilient to beetle outbreak, therefore better meeting the spirit of the California Forest Practices Act to create healthy, productive, and appropriately stocked forests. We propose a series of tests of existing California Forest Practice Act rules in an effort to understand how FPA implementation on a long-term basis influences forest health. We focus on beetle outbreak in true fir forests because these stands have yet to reach crisis mortality levels when viewed at the state scale but, the frequency of *Heterobasidion* infections, and the distribution of both biological agents of mortality across the Sierra Nevada suggests the potential for a highly damaging outbreak. A companion project with the USDA Forest Service Sonora Service Center (Forest Health Protection – Evaluation Monitoring) aimed at validating and improving estimates of mortality in fir provides: 1) a rich set of reference study plots 2) a spatial dataset on patterns of fir mortality on public and private lands, and 3) a mechanistic risk projection for a variety of forest conditions. The present proposal complements, but is not dependent on the latter project; we aim to develop stand-level solutions to protect against future or ongoing mortality from bark beetle-root disease interactions on private timberlands while testing techniques that can be implemented on public lands. Because fir mortality levels are relatively limited, the timing for testing and implementing rules-based treatments is excellent.

EMC-2017-012: (Collaborators: Dr. Michael Baker (CAL FIRE)) Knowledge of bat community composition among demonstration state forests (DSFs), seral stages, and silvicultural prescriptions is prerequisite to broader study of ecological dynamics among forest bats, forest pests, and forest management. The proposed study will be observational and include replication within study areas. Data resulting from this study will serve as baseline monitoring, provide information relevant to effectiveness monitoring, and will provide the equipment required for future trend monitoring. Proposed use of the Jackson

(Mendocino County), Latour (Shasta County), Mountain Home (Tulare County), and Soquel (Santa Cruz County) DSFs as study areas will allow for local (within DSF) and wider geographic scales of inference and four sampling seasons will be an appropriate temporal scale for study objectives. Management plans for each of the five California DSFs larger than 1,000 acres (CAL FIRE 2008, 2010, 2013, 2016a, 2016b) have chapters on historic, existing, and future priority research topics. Each plan has addressed wildlife research within these categories and none of these DSFs have hosted historic or current forest bat research projects (CAL FIRE 2008, 2010, 2013, 2016a, 2016b). Although lists of species likely to occur on some DSFs have been developed from species ranges and habitat preferences, no locally collected baseline data regarding the bat species present on these DSFs is currently available. The proposed applied research is designed to elucidate relationships among bats and habitats beyond short-term effects by sampling from sites resulting from older forest habitat manipulation within the context of management of forests for timber products in western North American forests. To reduce noted complicating factors, only interior locations within forest stands of interest will be acoustically sampled for bat activity levels and forest insect communities will be sampled within the same stands at interior locations > 50m from acoustic stations.

Commented [SH9]: Delete from strategic plan and move to Work Plan.

SUMMARY OF PROJECTS APPROVED OR UNDER CONSIDERATION AS OF DECEMBER 2018

The following summary table is a catalog of monitoring projects approved or under consideration by the Effectiveness Monitoring Committee. For individual Project Summary(s) and concept proposals that provide more detailed project information, visit the EMC website (bofdata.fire.ca.gov/board_committees/effectiveness_monitoring_committees/).

Commented [SH10]: Move to Work Plan. I am not sure that we need this status table because we have the other one.

Project Number	Project Title	Current Status	Principal Investigator(s)
EMC-2016-003	REPEAT LIDAR SURVEYS TO DETECT STORM-TRIGGERED LANDSLIDES. This project is a precursor supporting study for Project Proposal EMC-2016-3 Conceptual Design and Implementation Planning for Evaluation of Effectiveness of FPR's for Unstable Areas.	Ranked, funded, project contract being prepared	M. O'Connor (Public), CGS
<u>EMC-2017-001</u>	Effects of Forest Stand Density Reduction on Nutrient Cycling and Nutrient Transport at the Caspar Creek Experimental Watershed	<u>Ranked, funded</u>	<u>H. Dahlke, R. Dahlgren</u>
<u>EMC-2017-002</u>	Using Automated Bird Recorders to Determine Differences in Bird Occupancy of Four Habitat Types in a Post-Fire Setting	<u>Funded and in progress, results pending</u>	<u>S. Stanish</u>
<u>EMC-2017-003</u>	Intensive Road Effectiveness Monitoring for the Caspar Creek Third Experiment	<u>Tabled by PI until further notice</u>	<u>CAL FIRE</u>
<u>EMC-2017-004</u>	Monitoring Class III watercourse runoff in managed forests	<u>Ranked, funded, project work begun</u>	<u>CAL FIRE</u>
<u>EMC-2017-005</u>	Northern Spotted Owls and Notices of Emergency Timber Operations for Post-fire Timberland	<u>Awaiting Revised Project Proposal</u>	<u>CDFW and USFWS</u>
EMC-2017-006	Tradeoffs among riparian buffer zones, fire hazard, and species composition in the Sierra Nevada	Ranked, funded, experimental status granted, project work begun	UC Berkeley
EMC-2017-007	The life cycle of dead trees: Implications for forest management in the Sierra Nevada.	Ranked, funded, experimental status granted, project work begun	UC Berkeley
EMC-2017-008	Effectiveness Monitoring and Evaluation of Rules to Minimize Fir Mortality from Root Disease and Bark Beetle Interactions	Ranked, funded, contract under review	Cal Poly, San Luis Obispo, CAL FIRE

EMC-2017-009	Effectiveness of Class II watercourse and lake protection zone (WLPZ) Forest Practice Rules (FPRs) at maintaining or restoring canopy closure, stream water temperature, and primary productivity.	Awaiting Revised Project Proposal	Oregon State University
EMC-2017-010	Effectiveness of meadow and wet area restoration as an alternative to watercourse and lake protection zone (WLPZ) rules.	Ranked, funded, but withdrew from process by PI	Cal Poly, San Luis Obispo
EMC-2017-011	Effectiveness of detecting barred owls using the current (2012) USFWS NSO survey protocol which has been incorporated into the California Forest practice rules as the primary method of avoiding take of NSO.	Awaiting Revised Project Proposal	Redwood Forest Foundation, Strix Wildlife Consulting
EMC-2017-012	Assessment of Night-Flying Forest Pest Predator Communities on Demonstration State Forests – with Monitoring across Seral Stages and Silvicultural Prescriptions	Ranked, funded, contract being prepared	M. Baker (CAL FIRE)

CURRENT EMC APPOINTED MEMBERS AND STAFF

For FY 2018/2019, the committee has two Co-Chair positions, 7 agency representatives (1 vacancy), 4 EMC Members (1 wildlife biology vacancy and 2 academic vacancies), and five support staff (Appendix A). The EMC and Board staff are conducting outreach to both the monitoring and academic communities to fill these vacated positions.

Commented [SH11]: Move this entire section to the Work Plan

Commented [PC12]: update

Name	Specialty	Affiliation	Term Expiration
Russ Henly, Ph.D.	Co-Chair, RPF 2560	California Natural Resources Agency	

Name	Specialty	Affiliation	Term Expiration
Susan Husari	Co-Chair, Forestry/Fire Management	Board of Forestry and Fire Protection	
Agency Representatives			
Stacy Drury	Fire Ecology	USDA: Forest Service, Pacific Southwest Research Station	
Mandy Culpepper	Wildlife	California Department of Fish and Wildlife	
Drew Coe	Hydrology/Forestry RPF 2981	CAL FIRE	
VACANT	Water Quality	State Water Resources Control Board	
Justin LaNier	Geology/Hydrology/Water Quality	Central Valley Regional Water Quality Control Board	
Clarence Hostler	Fisheries	NOAA: National Marine Fisheries Service	
Bill Short	Geology/Watersheds	California Geological Survey	
Jim Burke	Geology/Water Quality	North Coast Regional Water Quality Control Board	
Monitoring Community			
Greg Giusti	Forestry/RPF 2709	University of California Cooperative Extension Advisor Emeritus-Lake and Mendocino Counties	7/1/2021
Matt House	Hydrology/Fisheries	Green Diamond Resource Company	8/31/2020
Sal Chinnici	Wildlife	Humboldt Redwood Company	7/1/2020
Matt O'Connor, Ph.D.	Geology/Geomorphology	Public	7/1/2018
Emily Burns, Ph.D.	Biology/Forestry	Public, Save the Redwood Leagues	7/1/2021
VACANT		University	
VACANT		University	
Support Staff			
Matt Dias	Executive Officer RPF 2773	Board of Forestry and Fire Protection	
Pete Cafferata	Hydrology/Forestry RPF 2184	CAL FIRE	
Stacy Stanish	Biology/Fisheries RPF 3000	CAL FIRE	
Dave Fowler	Geology/Water Quality	North Coast Regional Water Quality Control Board	
Connor Pompa	Forestry	Board of Forestry and Fire Protection	

Name		Specialty		Affiliation	Term Expiration
Cliff Harvey		Water Quality		SWRCB	

Commented [SH13]: